

ABSTRACT OF THE DISCLOSURE

A method of preparing a cellulosic fiber composite is provided comprising mixing protein hydrolysates and a synthetic resin to produce a resin binder. The synthetic resin can be phenolic resin, isocyanate resin, or combinations thereof. The method further comprises mixing the resin binder with a cellulosic material to form a cellulosic material/resin binder blend, felting the blend to form a low-moisture content mat, and pressing the mat at an elevated temperature and pressure, producing the cellulosic fiber composite. The amount of the resin binder can be between about 2% and about 15% of the dry weight of the cellulosic material. The protein hydrolysates provide a composite with a reduced amount of petrochemicals. The composite can also contain a silicone, silane, or combination thereof. The low moisture-content mat does not require drying prior to pressing. Additional methods can be employed to produce finished cellulosic fiber composite articles.